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CLAIMS

1. A correcting device for correcting a tremble of a focused image comprises:

a correction optical system for correcting a tremble of an optical axis in an optical device;

a driving frame, holding said correction optical system, that can be moved in a predetermined direction on a plane perpendicular to said optical axis;

a driving mechanism that includes a shaft, the central axis of which is parallel to said predetermined direction and drives linearly said shaft along said central axis; and

a transmitting mechanism that transmits the linear movement of said shaft to said driving frame by supporting said shaft at both ends of said shaft.

2. A correcting device according to claim 1; wherein said predetermined direction corresponds to the vertical direction when said optical device is held in a usual position.

3. A correcting device according to claim 1; wherein said transmitting mechanism includes:

two projecting portions that project from said driving frame along said optical axis so as to face the corresponding ends of said shaft; and

a pressing member, provided on at least one of said two projecting portions, that causes said shaft to be supported

at both ends by pressing said shaft against the other of said two projecting portions.

4. A correcting device according to claim 3, further comprises two guide holes, the longitudinal axis of which extends in said predetermined direction, and said two projecting portions are respectively moved in said two guide holes,

whereby said driving frame is moved being guided in said predetermined direction.

5. A correcting device according to claim 1, wherein said driving mechanism includes a screw feeder mechanism that transmits the rotation of said motor to said shaft, and

when said shaft linearly moves rotating by said screw feeder mechanism, said ends of said shaft are in point-contact with said transmitting mechanism.

6. A correcting device according to claim 3, wherein said pressing member includes:

a case that is fixed on one of said projecting portions;

a press pin that can be moved along the central axis of said shaft in said case; and

a coil spring provided in said case, that urges said press pin along the central axis of said shaft,

the tip end of said press pin being spherical and in contact with one end of said shaft at all times.

7. A correcting device according to claim 3, wherein said

pressing member is a set screw fixed on one of said projecting portions, a tip end of said set screw being spherical, said tip end being in point-contact with one end of said shaft and pressing said shaft along the axis of said shaft.

8. A correcting device according to claim 3, wherein said pressing member is a plunger fixed on one of said projecting portion, said plunger including: a ball that is provided at a tip end of said plunger; a coil spring that urges said ball along the axis of said shaft.

9. A correcting device according to claim 3, wherein one of said ends of said shaft is spherical, and a plane portion perpendicular to the axis of said shaft is formed on one of said projecting portions, and said spherical end of said shaft is in contact with said plane portion at all times.

10. An optical device comprising a correction mechanism for correcting a tremble of a focused image, said correction mechanism correcting a tremble of an optical axis of said optical device by moving a correction optical system in a first and a second direction which cross at right angles on a plane perpendicular to said optical axis,

wherein said correction mechanism comprises:

a first driving frame which can be moved in said first direction, and on which an opening portion is formed;

a first driving mechanism which includes a first shaft parallel to said first direction and moves linearly said first

shaft along its axis;

a first transmitting mechanism which supports said first shaft at both ends of said first shaft, being fixed on said first driving frame, whereby a linear movement of said first shaft is transmitted to said first driving frame;

a second driving frame which can be moved in said second direction and holds said correction optical system;

a second driving mechanism which includes a second shaft parallel to said second direction and moves linearly said second shaft along its axis; and

a second transmitting mechanism which supports said second shaft at both ends of said second shaft, being fixed on said second driving frame, whereby a linear movement of said second shaft is transmitted to said second driving frame,

said second driving frame, said second driving mechanism, and said second transmitting mechanism being supported by said first driving frame.

11. A correction device for correcting a tremble of a focused image comprises:

a correction optical system for correcting a tremble of an optical axis of an optical device;

means for holding said correction optical system, that can be moved in a predetermined direction on a plane perpendicular to said optical axis;

means for driving said holding means, including a shaft,

the central axis of which is parallel to said predetermined direction, said driving means driving linearly said shaft along said central axis;

means for supporting said shaft; and

means for transmitting the linear movement of said shaft to said driving frame through said supporting means,

wherein said supporting means supports said shaft at a predetermined pressing force independently of the position of said optical device.